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| APPLICATION NO.                      | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------------------|-------------|----------------------|---------------------|------------------|
| 10/721,791                           | 11/26/2003  | Arno Jan Bleeker     | 081468-0306888      | 4134             |
| 909                                  | 7590        | 04/22/2005           | EXAMINER            |                  |
| PILLSBURY WINTHROP SHAW PITTMAN, LLP |             |                      | MATHEWS, ALAN A     |                  |
| P.O. BOX 10500                       |             |                      | ART UNIT            | PAPER NUMBER     |
| MCLEAN, VA 22102                     |             |                      | 2851                |                  |

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                 |                |
|------------------------------|-----------------|----------------|
| <b>Office Action Summary</b> | Application No. | Applicant(s)   |
|                              | 10/721,791      | BLEEKER ET AL. |
| Examiner                     | Art Unit        |                |
| Alan A. Mathews              | 2851            |                |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.                                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-5,9,10,13-15,18 and 20-22 is/are rejected.
- 7) Claim(s) 6-8,11,12,16 and 17 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 26 November 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/26/03.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 9, 10, 13-15, 18, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loor et al. (U. S. Patent No. 6,204,875) in view of Gelbart (U. S. Patent No. 4,577,932). Loor et al. discloses in figure 1 and column 6, a radiation system 101, which could be a laser diode. Column 2, lines 40-42, also discloses the use of a pulsed laser. Light modulator 103 (along with element 108) is the programmable patterning structure configured to pattern the beam. The projection system includes element 104. The positioning structure includes what moves the photosensitive material (substrate) on 107. The optical structure is the rotating polygonal mirror 105 configured to move the projected beam relative to the projection system such that the projected beam is substantially stationary relative to the substrate (see the last four lines of the Abstract). Thus, Loor et al. discloses the invention claimed except for specifically stating that the projected beam is substantially stationary relative to the substrate during said at least one pulse. Gelbart discloses in figure 1 a laser diode 1 of the pulse type. Gelbart further discloses in column 2, lines 25-32, projecting the beam onto the light sensitive material 7 such that the projected beam is substantially stationary relative to the substrate during

at least one pulse. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide Loor et al. with a laser diode that projects a beam which is substantially stationary relative to the substrate during one pulse in view of Gelbart et al. for the purpose of less distortion during projection. It is further noted that Loor et al. discusses Gelbart et al. in column 2, lines 33-46. The term “lithographic” in the preamble has not been given any patentable weight. With respect to claim 14, the claim is a product-by-process, with the “device” being the product. MPEP 2113 states **that the determination of patentability of a product-by-process claim is based on the product itself. The patentability of a product does not depend on its method of production.** The device or wafer produced in the modified device of Loor et al. and Gerbart appears to be the same product as produced by claim 14. The Examiner can find no difference in the device or wafer produced in the modified device of Loor et al. and Gerbart than the device or wafer produced by claim 14. It is further noted that MPEP 2113 even gives an example where the process of making the product was allowed, but the product-by-process was rejected.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 9, 10, 13-15, 18, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Katzir et al. (U. S. Patent Application Publication No. 2001/0010536 A1, which is equivalent to EP 1 115 031 A2, cited as an X reference in a European Search Report and cited in Applicant's PTO-1449). Figures 1, 4, and 6, and page 6, paragraph # 133, discloses radiation system 14 (pulsed laser) configured to provide a pulsed beam of radiation. The programmable patterning structure is element 32 (figures 1 or 4) or element 104 (figure 6). The projection system 94 projects the pattern beam onto substrate 40. The position structure is what moves substrate 40. Paragraph # 148 and paragraph # 155 disclose an optical structure which is the polygonal mirror 96 (figure 4) or the polygonal mirror 120 (figure 6). Paragraph # 163 states, "Accordingly, coordinating the relative directions and velocities of the projected image of the acoustic wave and the velocity of scanning effectively "freezes" the image of the acoustic wave in modulator 32 on the substrate 40 ---". With respect to claim 14, the claim is a product-by-process, with the "device" being the product. MPEP 2113 states **that the determination of patentability of a product-by-process claim is based on the product itself. The patentability of a product does not depend on its method of production.** The device or wafer produced in Katzir et al appears to be the same product as produced by claim 14. The Examiner can find no difference in the device or wafer produced in Katzir et al. than the device or wafer produced by claim 14. It is further noted that MPEP 2113 even gives an example where the process of making the product was allowed, but the product-by-process was rejected.

***Allowable Subject Matter***

5. Claims 6-8, 11, 12, 16, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents cited in the PTO-1449 are cited for the same reasons they were cited in Applicant's IDS. The patent to Mei is cited to show in figure 2 a polygonal mirror and a DMD used in a lithographic apparatus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan A. Mathews whose telephone number is (571) 272-2123. The examiner can normally be reached on Monday through Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Alan A. Mathews*  
Alan A. Mathews  
Primary Examiner  
Art Unit 2851

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